

## METHOD AND APPARATUS FOR REMOVING NOISE FROM FEATURE VECTORS

### ABSTRACT OF THE DISCLOSURE

A method and computer-readable medium are  
5 provided for identifying clean signal feature vectors  
from noisy signal feature vectors. The method is  
based on variational inference techniques. One aspect  
of the invention includes using an iterative approach  
to identify the clean signal feature vector. Another  
10 aspect of the invention includes using the variance  
of a set of noise feature vectors and/or channel  
distortion feature vectors when identifying the clean  
signal feature vectors. Further aspects of the  
invention use mixtures of distributions of noise  
15 feature vectors and/or channel distortion feature  
vectors when identifying the clean signal feature  
vectors. Additional aspects of the invention include  
using a variance for the noisy signal feature vector  
conditioned on fixed values of noise, channel  
20 transfer function, and clean speech, when identifying  
the clean signal feature vector.